

Title (en)  
AIR FILTER UNIT AND AIR CONDITIONER

Title (de)  
LUFTFILTEREINHEIT UND KLIMAANLAGE

Title (fr)  
UNITÉ DE FILTRE À AIR ET CLIMATISEUR

Publication  
**EP 3816526 A4 20220302 (EN)**

Application  
**EP 19824618 A 20190626**

Priority  
• JP 2018124265 A 20180629  
• JP 2019025479 W 20190626

Abstract (en)  
[origin: EP3816526A1] An air conditioner of the present disclosure includes a fan filter unit whose power consumption efficiency determined by the following equation is  $600 \text{ kWh}/(\text{m}^2 \cdot \text{yr})$  or less when the fan filter unit is operated in such a manner that blowing efficiency  $\eta$  of a fan is 0.75. In the following equation,  $Q$  represents a nominal flow rate ( $\text{m}^3/\text{sec}$ ) of an air filter unit,  $\Delta P$  represents a pressure loss (Pa) of the air filter unit measured when air passes through the air filter unit at the nominal flow rate of the unit, and  $S$  represents an opening area ( $\text{m}^2$ ) of the air filter unit. Equation: power consumption efficiency  $\text{kWh}/(\text{m}^2 \cdot \text{yr}) = \{(Q \times \Delta P)/(\eta \times 1000)\} \times (24 \times 365)/S$ . The air conditioner of the present disclosure is suitable for reducing power consumption even when including the air filter unit which is large in size and has high filtration performance. An air filter unit of the present disclosure is suitable for the air conditioner of the present disclosure.

IPC 8 full level  
**F24F 7/06** (2006.01); **B01D 39/16** (2006.01); **B01D 46/52** (2006.01); **F24F 3/16** (2021.01); **F24F 13/28** (2006.01)

CPC (source: EP KR US)  
**B01D 39/08** (2013.01 - EP); **B01D 39/083** (2013.01 - EP); **B01D 39/12** (2013.01 - EP); **B01D 39/16** (2013.01 - US); **B01D 39/1623** (2013.01 - EP); **B01D 39/1692** (2013.01 - EP); **B01D 39/2003** (2013.01 - EP); **B01D 46/0043** (2013.01 - US); **B01D 46/16** (2013.01 - EP US); **B01D 46/42** (2013.01 - KR); **B01D 46/521** (2013.01 - KR); **B01D 46/523** (2013.01 - EP US); **B01D 46/543** (2013.01 - US); **F24F 8/10** (2021.01 - KR US); **F24F 8/108** (2021.01 - EP); **F24F 13/28** (2013.01 - EP); **B01D 2239/0233** (2013.01 - EP); **B01D 2239/0654** (2013.01 - EP); **B01D 2239/0668** (2013.01 - EP); **B01D 2239/0681** (2013.01 - EP); **B01D 2239/083** (2013.01 - EP); **B01D 2239/1208** (2013.01 - EP); **B01D 2239/1216** (2013.01 - EP); **B01D 2239/1233** (2013.01 - EP); **B01D 2265/021** (2013.01 - EP); **B01D 2273/30** (2013.01 - EP US); **B01D 2275/205** (2013.01 - US); **B01D 2279/50** (2013.01 - EP US)

Citation (search report)  
• [X] JP 2004167324 A 20040617 - DAIKIN IND LTD  
• [X] US 2009139405 A1 20090604 - SCHWARZ ROBERT [DE], et al  
• [X] EP 2840115 A1 20150225 - DAIKIN IND LTD [JP]  
• [X] JP 2014031995 A 20140220 - DAIKIN IND LTD  
• See references of WO 2020004504A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3816526 A1 20210505**; **EP 3816526 A4 20220302**; CN 112352129 A 20210209; CN 112352129 B 20220503; JP 2021035681 A 20210304; JP 6831494 B2 20210217; JP 7324739 B2 20230810; JP WO2020004504 A1 20200709; KR 101998031 B1 20190708; TW 202001160 A 20200101; TW I802717 B 20230521; US 2021252445 A1 20210819; WO 2020004504 A1 20200102

DOCDB simple family (application)  
**EP 19824618 A 20190626**; CN 201980043668 A 20190626; JP 2019025479 W 20190626; JP 2020192574 A 20201119; JP 2020510636 A 20190626; KR 20180116831 A 20181001; TW 108122811 A 20190628; US 201916973195 A 20190626